

JAN 27 2000

K993986

**510(k) SUMMARY OF SAFETY AND EFFECTIVENESS  
For Syva Emit® II Methaqualone Assay**

**1. Manufacturer and Contact Information:**

Manufacturer: Syva Company-Dade Behring Inc.  
20400 Mariani Ave.  
San Jose, CA 95014

Contact Information: Paul Rogers  
Syva Company-Dade Behring Inc.  
3403 Yerba Buena Road  
San Jose, CA 95161-9013  
Tel: 408-239-2309

**2. Device Classification Name:**

"Methaqualone Test Systems" is a Class II device (21 CFR 862.3630, revised April 1, 1998).

**3. Intended Use:**

The Syva Emit® II Plus Methaqualone Assay is a homogeneous enzyme immunoassay with a 300 ng/mL cutoff. The assay is intended for use in the qualitative and semiquantitative analyses of methaqualone in human urine.

**4. Device Description and Characteristics:**

This 510(k) Summary of Safety and Effectiveness is being submitted in accordance with the requirements of SMDA 1990.

The Syva Emit® II Plus Methaqualone Assay is a homogenous enzyme assay intended for use in qualitative and semiquantitative analysis of methaqualone in human urine.

The Syva Emit® II Plus Methaqualone Assay has been found to be equivalent to the predicate device, Syva Emit® II Methaqualone Assay, with regard to analyte detected, intended use, and performance characteristics.

Comparative Analysis: The Syva Emit® II Plus Methaqualone Assay showed excellent correlation to the predicate method. The comparative analyses to the predicate method resulted in 98 % agreement in finding specimens negative and positive.

## **510(k) SUMMARY OF SAFETY AND EFFECTIVENESS For Syva Emit® II Plus Methaqualone Assay (cont.)**

Spiked-Sample Recovery: In qualitative spike analysis, the Syva Emit® II Plus Methaqualone Assay correctly identified the spiked specimens containing less than 300 ng/mL methaqualone as negative and the spiked specimens containing greater than 300 ng/mL methaqualone as positive. Known levels of methaqualone, spiked at levels less than or equal to minus 25 % of the cutoff (0 to 225 ng/mL) and spiked at levels greater than or equal to plus 25% of the cutoff (375 to 3000 ng/mL), were consistently distinguished as negative or positive.

The semiquantitative use was assessed by determining the accuracy of recovery for the analyte-spiked samples by the Syva Emit® II Plus Methaqualone Assay. Negative human urine was spiked with concentrations of methaqualone at levels throughout the semiquantitative range of 150 to 900 ng/mL. For each known concentration, drug recovery was calculated using the average concentration obtained by the Emit® II Plus Methaqualone Assay. Within this range, recovery was within 15% of the nominal concentrations of spiked analyte.

Precision: The Syva Emit® II Plus Methaqualone Assay was analyzed for precision in both qualitative (rate) and semiquantitative (concentration) modes. For both modes, acceptable within-run and total precision statistics, coefficients of variation (CV), were observed.

Qualitative results, determined from rates for controls and cutoff calibrator, gave values for within-run precision CV ranging from 0.4 to 0.5 % and values for total precision CV ranging from 0.5 to 0.7 %.

Semiquantitative results, determined from concentrations for controls and cutoff calibrator, gave values for within-run CV ranging from 0.9 to 1.0 % and values for total precision CV ranging from 1.2 to 1.7 %.

Sensitivity: The sensitivity level of the Syva Emit® II Plus Methaqualone Assay is less than 43 ng/mL. This level represents the lowest concentration of methaqualone that can be distinguished from 0 ng/mL with a confidence level of 95%.

### **5. Substantial Equivalence:**

In conclusion, Syva Company–Dade Behring Inc. considers the Syva Emit® II Plus Methaqualone Assay to be substantially equivalent to the Syva Emit® II Methaqualone Assay with regard to analyte detected, intended use, and performance characteristics.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Food and Drug Administration  
2098 Gaither Road  
Rockville MD 20850

**JAN 27 2000**

Mr. Paul L. Rogers, Jr.  
Senior Manager, Regulatory Affairs  
Syva Company – Dade Behring Inc.  
3403 Yerba Buena Road  
P.O. Box 49013  
San Jose, California 95161-9013

Re: K993986  
Trade Name: Syva Emit® II Plus Methaqualone Assay  
Regulatory Class: II  
Product Code: KXS  
Dated: November 22, 1999  
Received: November 24, 1999

Dear Mr. Rogers:

We have reviewed your Section 510(k) notification of intent to market the device referenced above and we have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

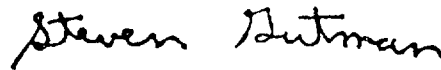
If your device is classified (see above) into either class II (Special Controls) or class III (Premarket Approval), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 895. A substantially equivalent determination assumes compliance with the Current Good Manufacturing Practice requirements, as set forth in the Quality System Regulation (QS) for Medical Devices: General regulation (21 CFR Part 820) and that, through periodic QS inspections, the Food and Drug Administration (FDA) will verify such assumptions. Failure to comply with the GMP regulation may result in regulatory action. In addition, FDA may publish further announcements concerning your device in the Federal Register. Please note: this response to your premarket notification submission does not affect any obligation you might have under sections 531 through 542 of the Act for devices under the Electronic Product Radiation Control provisions, or other Federal laws or regulations.

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This letter will allow you to begin marketing your device as described in your 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801 and additionally 809.10 for in vitro diagnostic devices), please contact the Office of Compliance at (301) 594-4588. Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR 807.97). Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its internet address "<http://www.fda.gov/cdrh/dsma/dsmamain.html>".

Sincerely yours,

A handwritten signature in black ink that reads "Steven Gutman". The signature is written in a cursive, slightly slanted style.

Steven I. Gutman, M.D., M.B.A.  
Director  
Division of Clinical Laboratory Devices  
Office of Device Evaluation  
Center for Devices and Radiological Health

Enclosure

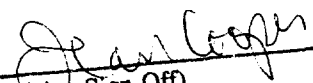
510(k) Number (If known): K993986

Device Name: Syva Emit® II Plus Methaqualone Assay

**Indications for Use:**

The Emit® II Plus Methaqualone Assay is a homogeneous enzyme immunoassay with a 300 ng/mL cutoff. The assay is intended for use in the qualitative and semiquantitative analyses of methaqualone in human urine. The Emit® II Plus assays are designed for use with a number of chemistry analyzers.

The Emit® II Plus Methaqualone Assay provides only a preliminary analytical test result. A more specific alternative chemical method must be used to obtain a confirmed analytical result. Gas chromatography/mass spectrometry (GC/MS) is the preferred confirmatory method. Other chemical confirmation methods are available. Clinical consideration and professional judgment should be applied to any drug-of-abuse test result, particularly when preliminary positive results are used.

  
(Division Sign-Off)  
Division of Clinical Laboratory Devices  
510(k) Number K993986

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Concurrence of CDRH, Office of Device Evaluation (ODE)

Prescription Use ✓  
(Per 21 CFR 801.109)

OR

Over-The-Counter Use \_\_\_\_\_

(Optional Format 1-2-96)